

中国科学院中国动物志编辑委员会主编

中国经济昆虫志

第三十六册

同翅目 蜡蝉总科

周尧 路进生 编著
黄桔 王思政

科学出版社

1985

内 容 简 介

本志记述了我国蜡蝉总科有害及常见种 124 种,隶属于 15 科 73 属,它们大多数是各种果树、农作物及林木的害虫。全书分概说,形态特征及分类三部分。概说中对其分类地位、种类及分布、生物学与经济关系均作了简要的说明。分类部分包括各科、属、种的形态特征的描述,有寄主、分布及检索表,多数种类有全形图,一部分种类附形态特征图,共 125 幅,最后附彩色图版两幅。

本书可供昆虫学工作者、农业、林业科学研究工作者以及大专院校师生参考。

中国科学院中国动物志编辑委员会主编

中 国 经 济 昆 虫 志

第三十六册

同翅目 蜡蝉总科

周 尧 路进生 编著

黄 桔 王思政

责任编辑 潘秀敏

科学出版社出版

北京朝阳门内大街 137 号

中国科学院印刷厂印刷

新华书店北京发行所发行 各地新华书店经售

1985 年 11 月 第 一 版 开本: 787×1092 1/16

1985 年 11 月 第一次印刷 印张: 10 1/4 插页: 1

印数: 0001—3,900 字数: 225,000

统一书号: 13031·3001

本社书号: 4072·13-7

定 价: 2.65 元

Editorial Committee of Fauna Sinica, Academia Sinica

ECONOMIC INSECT FAUNA OF CHINA

Fasc. 36

Homoptera Fulgoroidea

By

CHOU IO LU JINSHENG

HUANG JU WANG SIZHENG

(Department of Plant Protection, Northwestern College of Agriculture)

Science Press

Beijing, China

1985

序 言

蜡蝉总科的昆虫,在经济上具有相当重要性。在中国农业科学院植保研究所的《中国农业害虫名录》中,列为水稻害虫 31 种,甘蔗害虫 25 种,柑桔害虫 15 种,茶树害虫 8 种……。其中有些害虫种类可造成严重的灾害。

我国学者在飞虱科的分类上,对发生、迁徙规律及防治方面作了大量的工作,取得了可喜的成绩。近年来作者等对广蜡蝉科及颜蜡蝉科等作过分类研究。其他各科只极个别种类有人作过详细的习性观察。

本书为适应读者的需要,包括了我国已知的全部的科,尽量选择有经济意义及常见的种、属,根据实物标本作形态的描述;并描述了新种 6 个,中国新记录种 15 个,新记录属 7 个,所有模式标本皆保存于西北农学院昆虫标本室。寄主植物及地理分布二项则除根据采集记录外,并汇总了文献记载。生活习性及其防治方法则均为文献资料的综述。

本书所用的标本,主要是西北农学院(周尧、路进生、袁锋等人)历年来在全国各地采集来的。北京农业大学植保系(杨集昆、李法圣),天津南开大学生物系(郑乐怡),天津自然博物馆(程汉华、刘胜利),北京自然博物馆(刘思孔),广东中山大学生物系(华立中),云南林业厅(王用贤、郭志礼),广东昆虫研究所(林平、平正明),广西科学院生物所(尤其猷),广西农科院植保所(李永僖)等单位及同志给了我们无私的援助。

文献资料方面曾给我们帮助的有: Dr. G. A. Anufriev, Dr. J. Dlabola, Prof. D. W. Delong, Prof. L. L. Deitz, Dr. A. E. Emeljanov, Dr. F. G. Fennah, Dr. M. J. Fletcher, Dr. M. S. W. Ghauri, Dr. Y. Hori, Dr. F. R. Heller, Dr. A. Kalkandelen, Dr. J. Kathirithamby, Dr. L. Knutson, Dr. P. Lauterer, Prof. R. Linnavuori, Prof. H. J. Muller, Prof. P. W. Oman, Dr. R. Remane, Dr. K. Sulč, Dr. J. H. Tsai, Prof. C. Vidano, Dr. J. Vilbaste, Dr. M. R. Wilson, Dr. S. W. Wilson, Dr. B. Zelazny, 杨集昆同志,黄复生同志,虞佩玉同志,丁岩钦同志。

在本书写作中,王素梅、徐秋园、杨秀苕三同志绘制了部分黑白图;刘兰同志抄写部分稿件、打字和拼图;唐灞桥同志协助拍摄彩色照片。

作者对上面所列单位和个人,表示深切的谢意。

作 者

1983 年 10 月

目 录

一、概说	1
(一) 分类地位	1
(二) 种类及分布	2
(三) 生物学特性	3
(四) 经济关系	4
(五) 中名命名问题	5
二、形态	7
(一) 成虫	7
(二) 若虫	14
(三) 卵	15
三、分类	16
蜡蝉总科	16
蜡蝉总科分科检索表	16
(一) 蚁蜡蝉科 TETTIGOMETRIDAE	17
1. 额蚁蜡蝉属 <i>Egropa</i> Melichar (中国新记录)	17
(1) 缅甸额蚁蜡蝉 <i>E. tenasserimensis</i> Distant (中国新记录)	17
(二) 飞虱科 DELPHACIDAE (=ARAEOPIDAE)	18
(三) 菱蜡蝉科 CIXIIDAE	19
中国菱蜡蝉科分属检索表	20
2. 脊菱蜡蝉属 <i>Oliarus</i> Stål	20
脊菱蜡蝉属常见种检索表	20
(2) 四带脊菱蜡蝉 <i>O. quadricinctus</i> Matsumura	20
(3) 端斑脊菱蜡蝉 <i>O. apicalis</i> (Uhler)	21
(4) 褐脉脊菱蜡蝉 <i>O. insetosus</i> Jacobi	21
(5) 褐点脊菱蜡蝉 <i>O. cucullatus</i> Noualhier	23
3. 安菱蜡蝉属 <i>Andes</i> Stål	23
(6) 云斑安菱蜡蝉 <i>A. marmorata</i> (Uhler) (中国新记录)	24
4. 贝菱蜡蝉属 <i>Betacixius</i> Matsumura	24
(7) 斜纹贝菱蜡蝉 <i>B. obliquus</i> Matsumura	25
5. 帛菱蜡蝉属 <i>Borysthenes</i> Stål	25
(8) 斑帛菱蜡蝉 <i>B. maculatus</i> (Matsumura)	26
(四) 阔蜡蝉科 KINNARIDAE	26
6. 阔蜡蝉属 <i>Kinnara</i> Distant	27
(9) 烟阔蜡蝉 <i>K. fumata</i> (Melichar)	27
(五) 颖蜡蝉科 ACHILIDAE	28
中国颖蜡蝉科分属检索表	28
7. 广颖蜡蝉属 <i>Catonia</i> Uhler (中国新记录)	28
(10) 广颖蜡蝉 <i>C. sobrina</i> Uhler (中国新记录)	29
8. 马颖蜡蝉属 <i>Magadha</i> Distant (中国新记录)	29

(11) 马颖蜡蝉 <i>M. flavisigna</i> Distant (中国新记录)	30
9. 罗颖蜡蝉属 <i>Rhotala</i> Walker	31
(12) 条纹罗颖蜡蝉 <i>R. vittata</i> Matsumura (中国新记录)	31
10. 德颖蜡蝉属 <i>Deferunda</i> Distant (中国新记录)	32
(13) 尖头德颖蜡蝉 <i>D. acuminata</i> Chou et Wang, 新种	32
11. 卡颖蜡蝉属 <i>Caristianus</i> Distant	33
(14) 条背卡颖蜡蝉 <i>C. ulysses</i> Fennah	33
(六) 扁蜡蝉科 TROPIDUCHIDAE	33
中国扁蜡蝉科分属检索表	34
12. 笠扁蜡蝉属 <i>Trypetimorpha</i> Costa	34
(15) 日本笠扁蜡蝉 <i>T. japonica</i> Ishihara (中国新记录)	35
13. 伞扁蜡蝉属 <i>Epora</i> Walker	35
(16) 海南伞扁蜡蝉 <i>E. hainanensis</i> Chou et Wang, 新种	36
14. 舌扁蜡蝉属 <i>Ossoides</i> Bierman	36
(17) 红线舌扁蜡蝉 <i>O. lineatus</i> Bierman	37
15. 鳖扁蜡蝉属 <i>Cixiopsis</i> Matsumura	37
(18) 鳖扁蜡蝉 <i>C. punctatus</i> Matsumura (中国新记录)	37
16. 条扁蜡蝉属 <i>Catullia</i> Stål	38
(19) 条扁蜡蝉 <i>C. vittata</i> Matsumura	39
17. 叶扁蜡蝉属 <i>Mesepora</i> Matsumura	39
(20) 叶扁蜡蝉 <i>M. onukii</i> (Matsumura)	40
18. 梭扁蜡蝉属 <i>Sogana</i> Matsumura	40
(21) 长头梭扁蜡蝉 <i>S. longiceps</i> Fennah	40
19. 鳃扁蜡蝉属 <i>Tambinia</i> Stål	41
(22) 娇弱鳃扁蜡蝉 <i>T. debilis</i> Stål	42
20. 傲扁蜡蝉属 <i>Ommatissus</i> Fieber	42
(23) 罗浮傲扁蜡蝉 <i>O. lofouensis</i> Muir	43
(七) 脉蜡蝉科 MEENOPLIIDAE	43
中国脉蜡蝉科分属检索表	43
21. 阿脉蜡蝉属 <i>Anigrus</i> Stål	43
阿脉蜡蝉属分种检索表	44
(24) 脊额阿脉蜡蝉 <i>A. metalces</i> Fennah (中国新记录)	44
(25) 凹额阿脉蜡蝉 <i>A. nudifrons</i> Fennah (中国新记录)	45
22. 粒脉蜡蝉属 <i>Nisia</i> Melichar	45
(26) 雪白粒脉蜡蝉 <i>N. atrovonosa</i> (Lethierry)	45
23. 媛脉蜡蝉属 <i>Eponisia</i> Matsumura	46
(27) 媛脉蜡蝉 <i>E. guttula</i> Matsumura	46
(八) 袖蜡蝉科 DERBIDAE	47
中国袖蜡蝉科分属检索表	47
24. 广袖蜡蝉属 <i>Rhotana</i> Walker	48
广袖蜡蝉属分种检索表	48
(28) 褐带广袖蜡蝉 <i>R. satsumana</i> Matsumura	48
(29) 双线广袖蜡蝉 <i>R. kagoshimana</i> Matsumura (中国新记录)	50
25. 波袖蜡蝉属 <i>Losbanosia</i> Muir	50
(30) 嵌边波袖蜡蝉 <i>L. hibarensis</i> (Matsumura) (中国新记录)	50
26. 美袖蜡蝉属 <i>Megatropis</i> Muir	51

(31) 台湾美袖蜡蝉 <i>M. formosanus</i> (Matsumura)	51
27. 皤袖蜡蝉属 <i>Eptiocerus</i> Matsumura	52
皤袖蜡蝉属分种检索表	52
(32) 曲纹皤袖蜡蝉 <i>E. flexuosus</i> Uhler	52
(33) 红波皤袖蜡蝉 <i>E. rubiundatus</i> Chou et Wang	53
(34) 红点皤袖蜡蝉 <i>E. rubipunctatus</i> Chou et Wang	54
28. 幕袖蜡蝉属 <i>Mysidioides</i> Matsumura	54
(35) 札幌幕袖蜡蝉 <i>M. sapporoensis</i> (Matsumura)	54
29. 斑袖蜡蝉属 <i>Proutista</i> Kirkaldy	55
(36) 甘蔗斑袖蜡蝉 <i>P. moesta</i> (Westwood)	55
30. 饰袖蜡蝉属 <i>Shizuka</i> Matsumura	56
(37) 台湾饰袖蜡蝉 <i>S. formosana</i> Matsumura	56
31. 长袖蜡蝉属 <i>Zoraida</i> Kirkaldy	56
长袖蜡蝉属分种检索表	57
(38) 湖北长袖蜡蝉 <i>Z. hubeiensis</i> Chou et Huang, 新种	57
(39) 甘蔗长袖蜡蝉 <i>Z. pterophoroides</i> (Westwood)	57
32. 葩袖蜡蝉属 <i>Pamendanga</i> Distant	58
(40) 松村葩袖蜡蝉 <i>P. matsumurae</i> Muir	59
33. 红袖蜡蝉属 <i>Diotrombus</i> Uhler	59
(41) 红袖蜡蝉 <i>D. politus</i> Uhler	60
(九) 象蜡蝉科 DICTYOPHARIDAE	60
中国象蜡蝉科分属检索表	61
34. 丽象蜡蝉属 <i>Orthopagus</i> Uhler	62
(42) 丽象蜡蝉 <i>O. splendens</i> (Germar)	62
35. 鼻象蜡蝉属 <i>Saigona</i> Matsumura	63
鼻象蜡蝉属分种检索表	63
(43) 瘤鼻象蜡蝉 <i>S. gibbosa</i> Matsumura	63
(44) 尖鼻象蜡蝉 <i>S. ussuriensis</i> (Lethierry)	64
36. 尖象蜡蝉属 <i>Centromeria</i> Stål	65
(45) 东北尖象蜡蝉 <i>C. manchurica</i> Kato	65
37. 象蜡蝉属 <i>Dictyophara</i> Germar	66
象蜡蝉属常见种检索表	67
(46) 中华象蜡蝉 <i>D. sinica</i> Walker	67
(47) 伯瑞象蜡蝉 <i>D. patruelis</i> (Stål)	68
(48) 中野象蜡蝉 <i>D. nakanonis</i> Matsumura	68
38. 线象蜡蝉属 <i>Thanatodictya</i> Kirkaldy	69
(49) 双线象蜡蝉 <i>T. lineata</i> (Donovan)	69
(十) 广蜡蝉科 RICANIIDAE	70
中国广蜡蝉科分属检索表	72
39. 疏广蜡蝉属 <i>Euricania</i> Melichar	72
疏广蜡蝉属分种检索表	72
(50) 西藏疏广蜡蝉 <i>E. xizangensis</i> Chou et Lu	73
(51) 眼纹疏广蜡蝉 <i>E. ocellus</i> (Walker)	73
(52) 带纹疏广蜡蝉 <i>E. fascialis</i> Walker	74
(53) 透明疏广蜡蝉 <i>E. clara</i> Kato	74
40. 宽广蜡蝉属 <i>Pochazia</i> Amyot et Serville	74

宽广蜡蝉属分种检索表	75
(54) 阔带宽广蜡蝉 <i>P. confusa</i> Distant	75
(55) 眼斑宽广蜡蝉 <i>P. discreta</i> Melichar	76
(56) 圆纹宽广蜡蝉 <i>P. guttifera</i> Walker	77
(57) 电光宽广蜡蝉 <i>P. sizzata</i> Chou et Lu	77
(58) 鼎点宽广蜡蝉 <i>P. trinitatis</i> Chou et Lu	78
(59) 胡椒宽广蜡蝉 <i>P. pipera</i> Distant	78
(60) 尖峰宽广蜡蝉 <i>P. chienfengensis</i> Chou et Lu	78
41. 广翅蜡蝉属 <i>Ricania</i> Germar	79
广翅蜡蝉属分种检索表	79
(61) 八点广翅蜡蝉 <i>R. speculum</i> (Walker)	80
(62) 缘纹广翅蜡蝉 <i>R. marginalis</i> (Walker)	80
(63) 四斑广翅蜡蝉 <i>R. quadrimaculata</i> Kato	81
(64) 钩纹广翅蜡蝉 <i>R. simulans</i> Walker	81
(65) 粉黛广翅蜡蝉 <i>R. pulverosa</i> Stål	81
(66) 可可广翅蜡蝉 <i>R. cacaonis</i> Chou et Lu	82
(67) 山东广翅蜡蝉 <i>R. shantungensis</i> Chou et Lu	82
(68) 柿广翅蜡蝉 <i>R. sublimbata</i> Jacobi	83
(69) 琼边广翅蜡蝉 <i>R. flabellum</i> Noualhier	84
(70) 褐带广翅蜡蝉 <i>R. taeniata</i> Stål	84
(71) 暗带广翅蜡蝉 <i>R. fumosa</i> Walker	85
(十一) 蛾蜡蝉科 FLATIDAE	85
中国蛾蜡蝉科分属检索表	86
42. 卵翅蛾蜡蝉属 <i>Phromnia</i> Stål	86
(72) 卵翅蛾蜡蝉 <i>P. intacta</i> (Walker)	87
43. 彩蛾蜡蝉属 <i>Cerynia</i> Stål	87
彩蛾蜡蝉属分种检索表	88
(73) 彩蛾蜡蝉 <i>C. maria</i> (White)	88
(74) 线彩蛾蜡蝉 <i>C. lineola</i> Melichar	89
44. 络蛾蜡蝉属 <i>Lawana</i> Distant	89
(75) 紫络蛾蜡蝉 <i>L. imitata</i> Melichar	89
45. 缘蛾蜡蝉属 <i>Salurnis</i> Stål	90
(76) 褐缘蛾蜡蝉 <i>S. marginella</i> (Guérin)	90
46. 碧蛾蜡蝉属 <i>Geisha</i> Kirkaldy	91
(77) 碧蛾蜡蝉 <i>G. distinctissima</i> (Walker)	92
47. 希蛾蜡蝉属 <i>Hilavrita</i> Distant	92
(78) 西藏希蛾蜡蝉 <i>H. xizangensis</i> Chou et Lu	93
48. 美蛾蜡蝉属 <i>Melicharia</i> Kirkaldy	93
(79) 黄氏美蛾蜡蝉 <i>M. huangi</i> Chou et Lu	93
49. 星蛾蜡蝉属 <i>Cryptoflato</i> Melichar	94
(80) 晨星蛾蜡蝉 <i>C. guttularis</i> (Walker)	94
50. 涩蛾蜡蝉属 <i>Seliza</i> Stål	95
(81) 锈涩蛾蜡蝉 <i>S. ferruginea</i> Walker	95
51. 埃蛾蜡蝉属 <i>Exoma</i> Melichar	96
(82) 墨脱埃蛾蜡蝉 <i>E. medogensis</i> Chou et Lu	96
52. 叶蛾蜡蝉属 <i>Atracis</i> Stål	97

(83) 喜马拉雅蜡蝉 <i>A. himalayana</i> Distant.....	98
(十二) 娜蜡蝉科 NOGOGINIDAE	98
中国娜蜡蝉科分属检索表	98
53. 莹娜蜡蝉属 <i>Indogaetulia</i> Schmidt.....	99
(84) 红眼莹娜蜡蝉 <i>I. rubiocellata</i> (Chou et Lu).....	99
54. 披娜蜡蝉属 <i>Pisacha</i> Distant	100
披娜蜡蝉属分种检索表	100
(85) 栎纹披娜蜡蝉 <i>P. naga</i> Distant (中国新记录).....	100
(86) 广西披娜蜡蝉 <i>P. kwangstensis</i> Chou et Lu	101
55. 帕娜蜡蝉属 <i>Paravarcia</i> Schmidt	102
(87) 大帕娜蜡蝉 <i>P. decapterix</i> Schmidt	102
56. 纱娜蜡蝉属 <i>Sassula</i> Stål	103
(88) 龙州纱娜蜡蝉 <i>S. lungchowensis</i> Chou et Lu.....	103
(十三) 蜡蝉科 FULGORIDAE	104
中国蜡蝉科分属检索表	104
57. 悲蜡蝉属 <i>Penthicodes</i> Blanchard.....	105
悲蜡蝉属分种检索表	105
(89) 斑悲蜡蝉 <i>P. atomaria</i> (Weber)	105
(90) 锈悲蜡蝉 <i>P. caja</i> (Walker).....	106
58. 梵蜡蝉属 <i>Aphaena</i> Guerin-Meneville	107
(91) 纯翅梵蜡蝉 <i>A. decolorata</i> Chou et Wang.....	107
59. 丽蜡蝉属 <i>Limois</i> Stål	108
丽蜡蝉属分种检索表	108
(92) 东北丽蜡蝉 <i>L. kikuchi</i> Kato.....	108
(93) 察雅丽蜡蝉 <i>L. chagyabensis</i> Chou et Lu	109
(94) 湖南丽蜡蝉 <i>L. hunanensis</i> Chou et Wang.....	110
(95) 广西丽蜡蝉 <i>L. guangxiensis</i> Chou et Wang.....	111
60. 斑衣蜡蝉属 <i>Lycorma</i> Stål	112
(96) 斑衣蜡蝉 <i>L. delicatula</i> (White)	112
61. 鼻蜡蝉属 <i>Zanna</i> Kirkaldy	113
(97) 中华鼻蜡蝉 <i>Z. chinensis</i> (Distant)	113
62. 锥头蜡蝉属 <i>Saiva</i> Distant	114
(98) 锥头蜡蝉 <i>S. gemmata</i> (Westwood)	115
63. 蜡蝉属 <i>Fulgora</i> Linnaeus	116
蜡蝉属分种检索表	116
(99) “龙眼鸡” <i>F. candelaria</i> (Linnaeus).....	116
(100) 弧头蜡蝉 <i>F. spinolae</i> Westwood	117
(101) 白翅蜡蝉 <i>F. watanabei</i> Matsumura.....	118
(102) 黑翅蜡蝉 <i>F. nigripennis</i> Chou et Wang	118
(十四) 瓢蜡蝉科 ISSIDAE	119
中国瓢蜡蝉科常见属检索表	119
64. 席瓢蜡蝉属 <i>Sivaloka</i> Distant (中国新记录)	119
(103) 恶性席瓢蜡蝉 <i>S. damnosus</i> Chou et Lu. 新种	120
65. 脊额瓢蜡蝉属 <i>Gergithoides</i> Schumacher.....	120
(104) 脊额瓢蜡蝉 <i>G. carnatifrons</i> Schumacher.....	121
66. 圆瓢蜡蝉属 <i>Gergithus</i> Stål	121

圆瓢蜡蝉属分种检索表	121
(105) 世语圆瓢蜡蝉 <i>G. esperanto</i> Chou et Lu, 新种	122
(106) 异色圆瓢蜡蝉 <i>G. variabilis</i> Butler	122
(107) 网纹圆瓢蜡蝉 <i>G. reticulatus</i> Matsumura	123
(108) 龟纹圆瓢蜡蝉 <i>G. tessellatus</i> Matsumura	123
(109) 十星圆瓢蜡蝉 <i>G. iguchii</i> Matsumura	124
(十五) 璐蜡蝉科 LOPHOPIDAE	125
中国璐蜡蝉科分属检索表	125
67. 颖璐蜡蝉属 <i>Serida</i> Walker(中国新记录)	125
(110) 颖璐蜡蝉 <i>S. latens</i> Walker(中国新记录)	126
68. 爰璐蜡蝉属 <i>Elasmoscelis</i> Stål	126
(111) 扁足爰璐蜡蝉 <i>E. perforata</i> Walker	127
69. 兰璐蜡蝉属 <i>Lacusa</i> Stål	127
(112) 云南兰璐蜡蝉 <i>L. yunnanensis</i> Chou et Huang, 新种	128
70. 歪璐蜡蝉属 <i>Paracorethrura</i> Melichar(中国新记录)	129
(113) 歪璐蜡蝉 <i>P. iocnemis</i> (Jacobi)(中国新记录)	129
(十六) 颜蜡蝉科 EURYBRACHIDAE	130
中国颜蜡蝉科分属检索表	130
71. 旌翅颜蜡蝉属 <i>Ancyra</i> White	130
(114) 漆点旌翅颜蜡蝉 <i>A. annamensis</i> Schmidt	130
72. 讷颜蜡蝉属 <i>Nesiana</i> Metcalf	131
(115) 黑讷颜蜡蝉 <i>N. nigra</i> Chou et Lu	131
73. 珞颜蜡蝉属 <i>Loxocephala</i> Schaum	132
珞颜蜡蝉属分种检索表	133
(116) 网纹珞颜蜡蝉 <i>L. retinata</i> Chou et Lu	134
(117) 新网珞颜蜡蝉 <i>L. neoretinata</i> Chou et Huang	134
(118) 单点珞颜蜡蝉 <i>L. unipunctata</i> Chou et Huang	134
(119) 全斑珞颜蜡蝉 <i>L. perpunctata</i> Jacobi	134
(120) 雾珞颜蜡蝉 <i>L. nebulata</i> Chou et Huang	135
(121) 中华珞颜蜡蝉 <i>L. sinica</i> Chou et Huang	135
(122) 中华珞颜蜡蝉四川亚种 <i>L. sinica sichuanensis</i> Chou et Huang	136
(123) 列点珞颜蜡蝉 <i>L. seropunctata</i> Chou et Huang	136
(124) 半斑珞颜蜡蝉 <i>L. semimaculata</i> Chou et Huang	136
English summary	137
参考文献	141
寄主索引	144
中名索引	145
学名索引	148
图版	

二、形态

(一) 成虫

小型或中型的昆虫，体长很少超过 25 毫米，最小的种类只长 2 毫米，南方个别种类体长达 30 毫米。

头部 头呈各种形状，前端平截、圆形或尖形突出，或延伸很长。复眼突出在头的两侧面。从背面能见到的部分是顶，顶通常平坦，有明显的冠缝，将其分为二片，顶的边缘通常有脊线，有时还有中脊线和侧脊线，组成不同的图形。额从头的腹面可以见到，隆起或平坦，有时也有 1—3 条脊线。唇基有时分为后唇基及前唇基，上面有时也有脊线。额与唇基一起通称为“颜”，额与唇基的侧面为颊，颊向后折，有脊线与额分开。单眼通常 2 个，着生在复眼的下方，颊的凹陷处；很少种类具有中单眼（如有，生在额的前方）；也有少数种类完全没有单眼。触角短；着生在复眼下方；柄节短圆柱形，生有一个简单的鼓状感觉器；

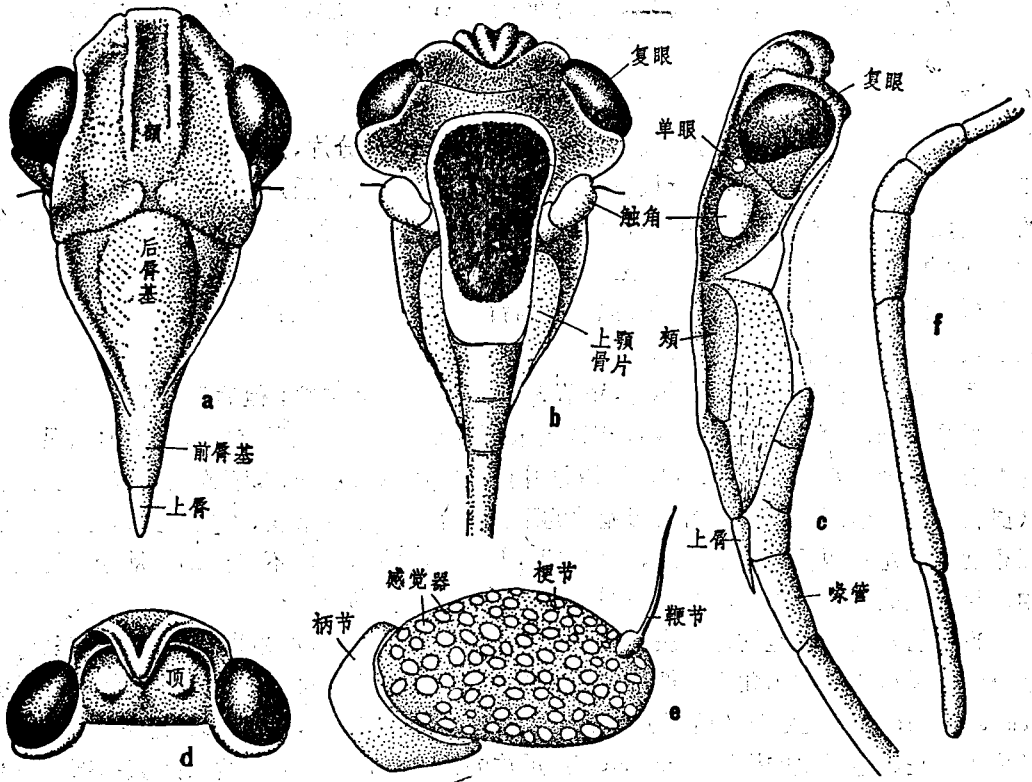


图3 蜡蝉总科昆虫的头(以斑衣蜡蝉 *Lycorma delicatula* (White)为例)(仿周尧)
 a. 头的正面; b. 头的后面(已从胸部取下); c. 头的侧面; d. 头的背面;
 e. 触角(更放大); f. 食管

梗节极膨大,圆球形或椭圆形,生有很多鼓形的感觉器,其周围有或没有附属的饰物;鞭节鬃状,基部有大形感觉器1—2个,再分节或不分节。口器刺吸式,下唇成分节的喙管;上唇小,三角形,盖在喙管背面基部的缺刻上。上颚口针和下颚口针包在喙管内,上颚的基骨片有时露出在颊的后面。

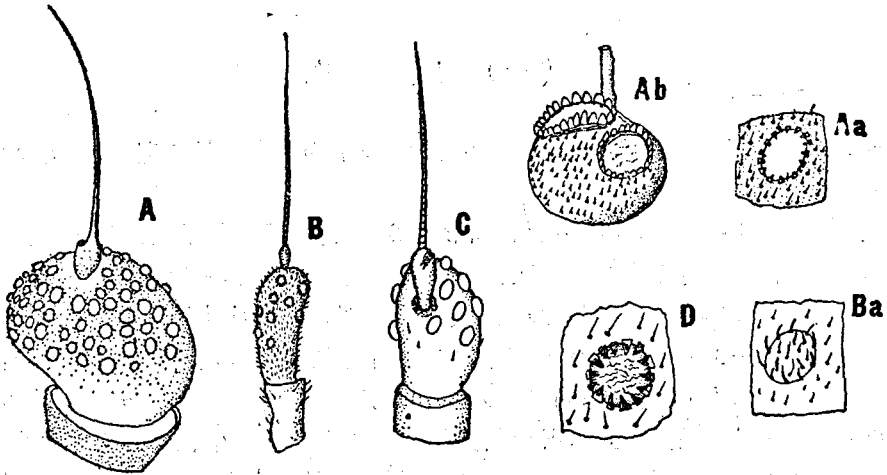


图4 蜡蝉总科昆虫的触角(仿周尧)

A. 斑衣蜡蝉 *Lycorma delicatula* (White)的触角, Aa 它的梗节感觉器, Ab 它的鞭节基部(均更放大); B. 稻灰飞虱 *Laodelphax striatella* (Fallen)的触角; Ba. 它的感觉器(更放大); C. 缅甸蚁蜡蝉 *Egropa tenasserimensis* (Distant)的触角; D. 伯瑞象蜡蝉 *Dictyophara patruelis* Stål 触角感觉器

胸部 第一节为前胸,背板较短,呈一横形骨片,不再分片,有时有1—5条纵脊线。第二节生有一对前翅的为中胸,背板发达,分为前盾片、盾片、小盾片,后盾片四部分,以盾片为最大;前盾片常被前胸背板所盖住;当昆虫翅在休止状态时,露出的部分只有中胸的盾片,有的书上叫它“小盾片”。在前翅的基部盖有鳞状的骨片,称为肩板(*tegula*),很少为前胸背板后缘所盖,肩板的存在是蜡蝉总科的特征。第三节生有后翅,为后胸,其背板较不发达,当翅休息时,将它完全盖住。

足 足的构造和其他昆虫相同,附节3节,爪一对,有中垫;但后足胫节背侧有1—7个坚强的侧刺,少数种类没有侧刺,但决无成列的刺毛(叶蝉总科有成列刺毛);后足胫节的端部有一列端刺(决不为2列,沫蝉总科有2列);附节第一、二节的端部有时也有刺。飞虱科后足胫节端部另有一对大形能动的距。前足和中足基节长,着生在身体近两侧处,互相远离。左右两后足基节短阔,互相靠近,并固定在身体上,不能活动。从胫节的刺和中后足着生的位置,能将蜡蝉总科和其他蝉亚目的科区分开来。

翅 前翅全翅质地均匀,决不呈半鞘翅;皮革质或膜质,如为膜质也比后翅坚强些,部分瓢蜡蝉科的种类为角质。部分种类有长翅型和短翅型两种不同的型式。前翅有爪缝(*claval suture*),将翅划分为两部分:前面大部为革片(*corium*),后面部分为爪片(*clavus*),爪片也就是其他昆虫的臀区(*anal area*)。爪片的边缘呈角度而分为两段:其基部一段当翅休息时紧贴“小盾片”,称为小盾缘(*scutellar border*),端部一段休息时互相接触,称连接缘(*commisural border*)或缝缘(*sutural border*)。

翅上纵的主脉依一般命名:前缘脉(C),亚前缘脉(Sc),径脉(R),中脉(M),肘脉

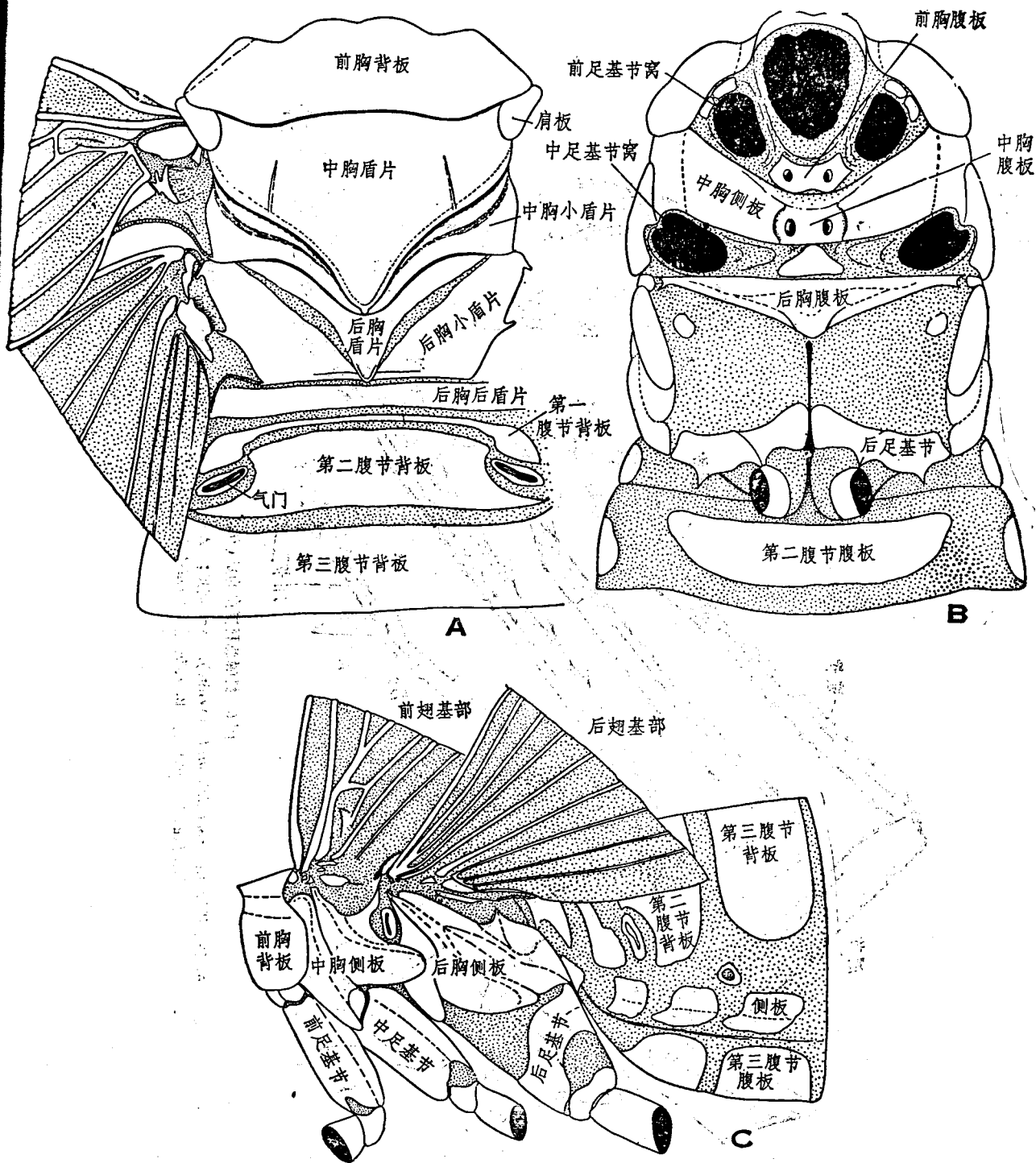


图5 蜡蝉总科的胸部特征——以斑衣蜡蝉 *Lycorma delicatula* (White) 为例(仿周尧)
 A. 背面; B. 腹面; C. 侧面

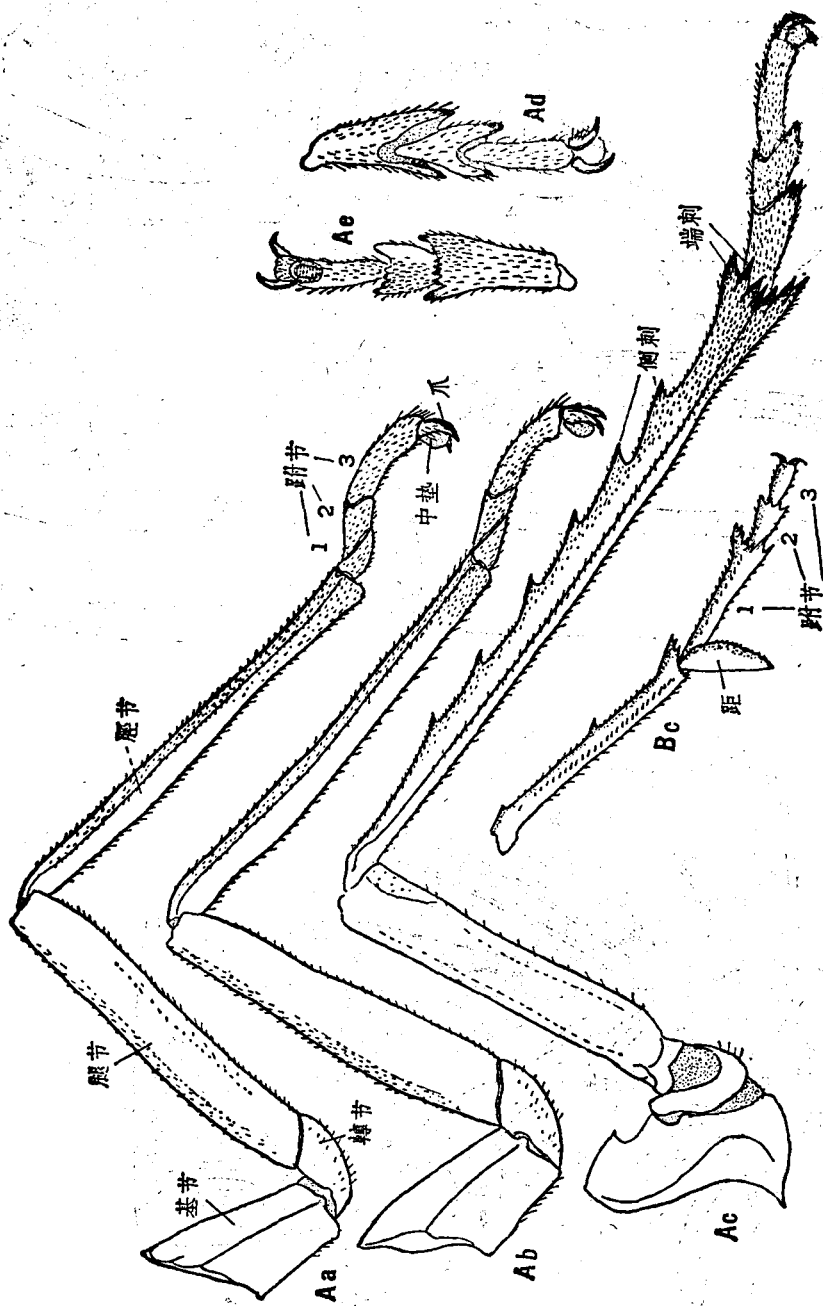


图6 蜡蝉总科昆虫的足(仿周亮)
 A. 斑衣蜡蝉 *Lycorma delicatula* (White); Aa. 前足; Ab. 中足; Ac. 后足; Ad, Ac 后足
 跗节及爪的背面和腹面; B. 稻灰飞虱 *Laodelphax striatella* (Fallen) 后足

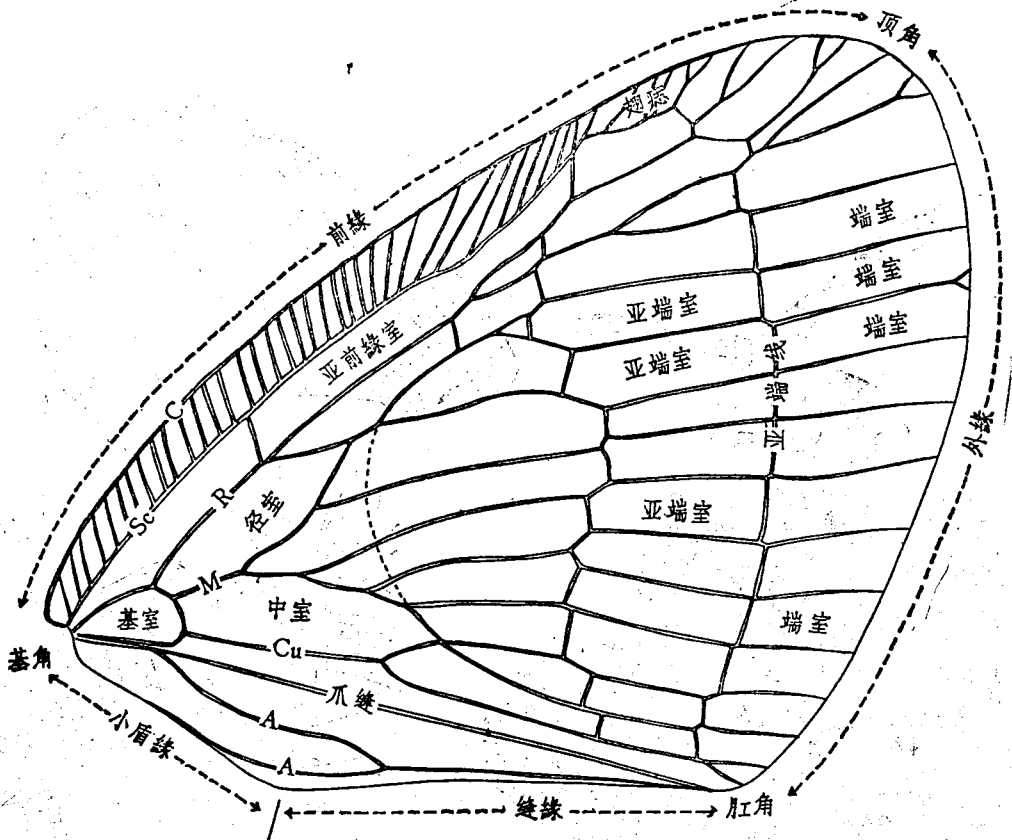


图7 蜡蝉总科的前翅特征:以疏广蜡蝉属 *Euricania* 为例

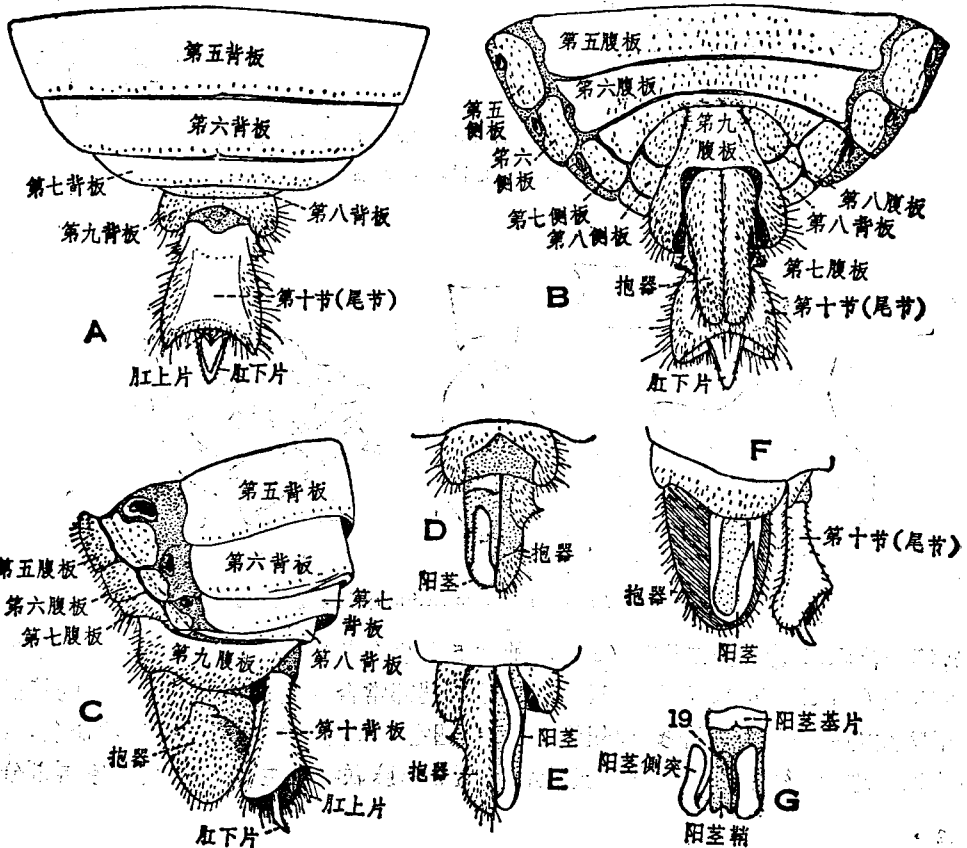


图8 斑衣蜡蝉 *Lycorma delicatula* (White) 雄生殖器(仿周尧)

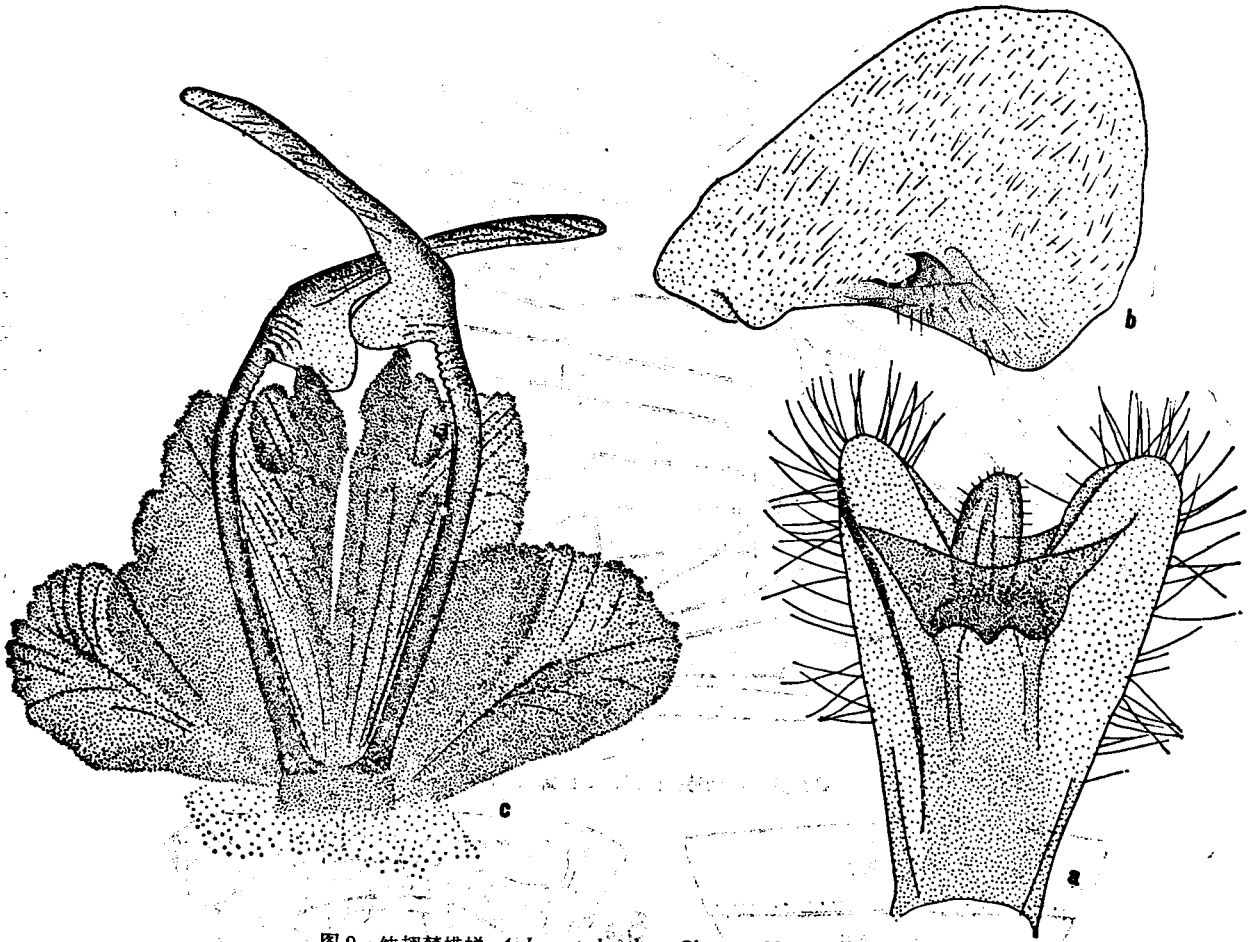


图9 纯翅梵蜡蝉 *Aphaena decolora* Chou et Huang 雄生殖器

a. 尾节; b. 抱器; c. 阳茎

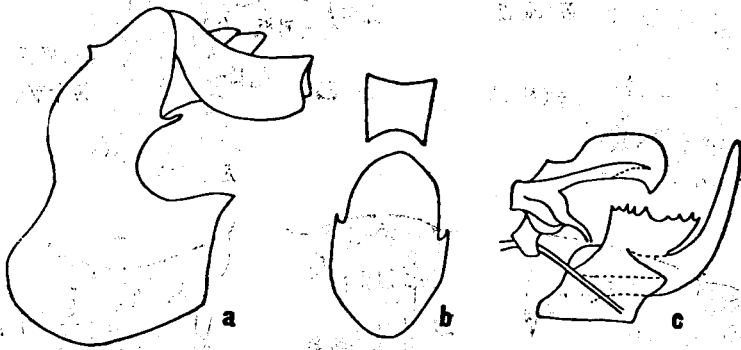


图10 雪白粒脉蜡蝉 *Nisia atrovonosa* Lethierry 雄生殖器 (仿 Fennah)

(Cu), 第一臀脉(1A)与第二臀脉(2A)。前面5条生在革片上。后面2条生在爪片上, 因之也叫爪脉(claval veins)。蜡蝉总科的2爪脉在端部常合并成“Y”形, 为一显著的特征。翅面由于脉纹的存在划分为许多小的区域, 称为翅室(cell); 翅室依其前面脉纹命名, 如径脉后的翅室称为“径室”, 余类推。翅上常有短的横脉联接在主脉之间, 将翅室再划分, 其

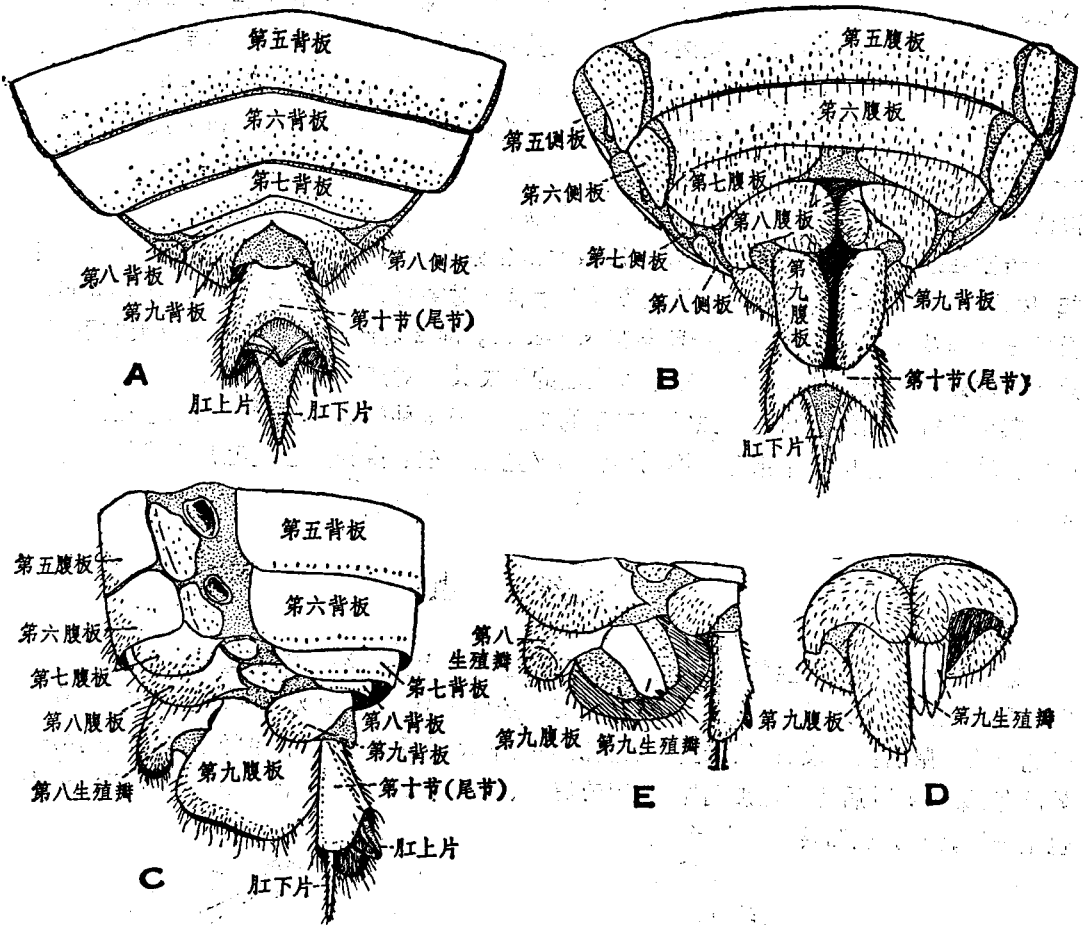


图 11 斑衣蜡蝉 *Lycorma delicatula* (White) 雌生殖器(仿周尧)

沿外缘的翅室称为端室 (apical cell), 其基部的小室为基室 (basal cell); 在翅的近端部不到达翅端缘的室称为亚端室 (subapical cells) 或端前室 (anteapical cells)。有些科的种类, 有些横脉前后对齐, 排成亚端线 (subapical line)。在叶蝉科、角蝉科和蝉科, 沿翅的外缘常有围脉 (peripheral vein), 蜡蝉总科是没有的。

前翅前缘脉在蛾蜡蝉科通常具有, 在其余各科只在若虫翅芽中见到这条气管, 到成虫期不见; 亚前缘脉常比径脉粗, 并常与后者平行或在基部相合并, 端部常有 2 条以上的分支; 径脉通常不发达, 分支较少; 中脉发达, 2—4 分支, 有时到翅缘又复分支; 肘脉 2 分支, 也有不分支的; 革片与爪片间的分界脉, 有些学者称为后肘脉 (Pcu), 有的则称为第一臀脉 (1A); 其后 2 条爪脉, 前一派学者认为是 1A 与 2A, 而后一派学者认为是 2A 与 3A。

后翅比前翅大或小, 也有那些主要的纵脉, 但分枝较简单; 臀区发达或不发达 (在后翅这个区域不叫爪片, 臀脉也不叫爪脉); 没有围脉。

后翅亚前缘脉通常和径脉合并成一条脉纹, 只在端部分开; 径脉通常不分支; 其后二臀脉通常不分支, 第三臀脉则分为 2—3 支。

腹部 腹部长, 圆柱形或圆锥形, 或断面成横三角形, 由 11 节构成。第一、二节很退化, 有时两侧有听器的遗迹存在, 第三至第七节雌雄一样, 第八、九节为生殖节, 雌雄构造

不同。第十节管状,称为肛管(anal tube);第十一节小,刺状,称为肛刺突(anal style)。

雄性生殖器 雄性第九节发达,称为生殖荚(genital capsule),或背腹板完全愈合,成为尾节(pygofer);第九节的背面后缘刻陷,着生由第十节形成的肛管。有些种类第九节腹板后面生有一对生殖板(genital plates),有的叫生殖刺突(genital style)或阳茎侧突(parmeres),这对瓣在交配时起着抱器的作用。阳茎(aedeagus)的构造极为复杂,各科间难以比同,有时从不同位置生出成对或不成对的突起。

雌性生殖器 雌性的第八、九两节腹板通常各分为左右二瓣,第八腹板上生有一对突起,称为第一产卵瓣(1st valvula),第九腹板上生有2对突起,称为第二产卵瓣(2nd valvula)及第三产卵瓣(3th valvule)或产卵器鞘(saw-case)。前2对产卵瓣常包在生殖荚的里面,只第三对露出在荚的外面。卵产在植物表面的种类其3对产卵瓣都不发达。

其他特征 蜡蝉总科的昆虫常有丰富的蜡腺。很多种类雌性的腹部末端包在白色蜡质覆盖物内。身体的各个部分有不同形状的感觉毛,在若虫身上感觉毛常组成特殊的感觉窝。

(二) 若 虫

若虫外形一般和成虫相似而小,随龄期而逐渐增大。但细微特征有很大的出入。如作者观察到斑衣蜡蝉及飞虱的喙管在若虫第一龄只2节,到成虫为5节,触角梗节上鼓状感觉器第一龄若虫时没有,第二龄以后随龄期的增大而逐渐增多,后足胫节上的缘刺第一龄没有,第二龄以后逐渐增加而显著;跗节第一、二龄时2节,第三龄以后成为3节;翅芽也是一样,到第三、四龄才显著形成。

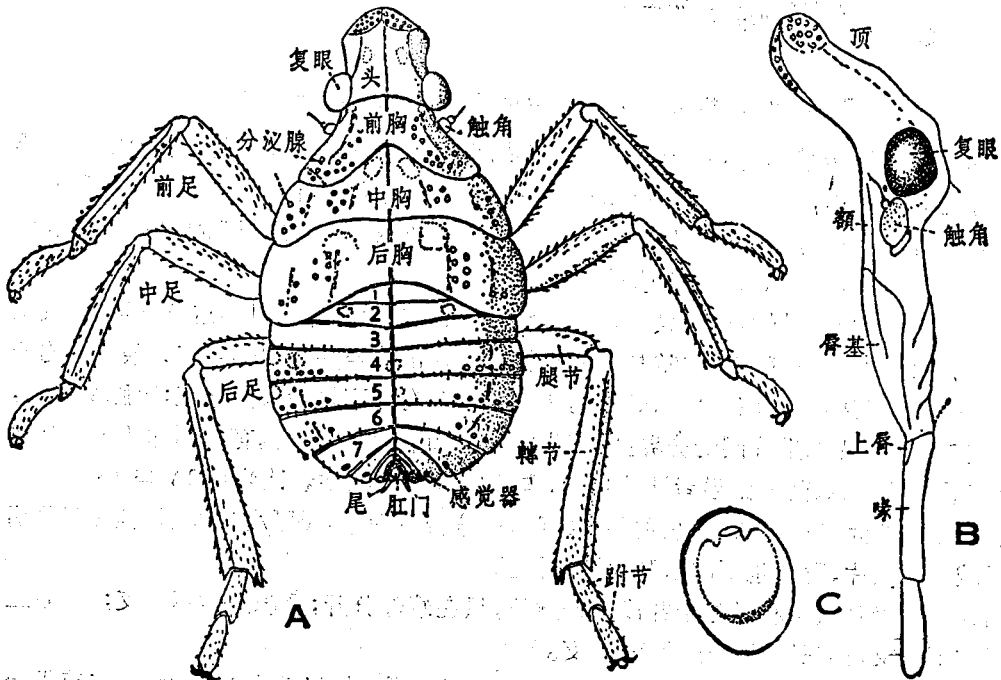


图 12 斑衣蜡蝉 *Lycorma delicatula* (White) 一龄若虫(仿周亮)

身体各部存在的感觉窝陷,按一定的部位排列,各种类不同,可作为分类的依据。

(三) 卵

蜡蝉总科种类的卵,基本上可分类二种形式:

产卵在植物组织中的种类,如飞虱科、菱蝉科各属,卵呈香蕉或长肾脏形;其产卵在植物表面的种类,如蜡蝉科,卵呈麦粒状;蚁蜡蝉科的卵常产在叶面,卵圆形而附有短柄。

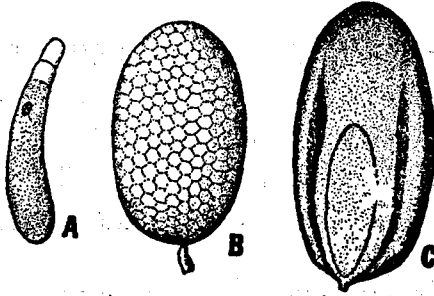


图 13 蜡蝉总科昆虫的卵(仿周尧)

A. 一种飞虱的卵; B. 一种蚁蜡蝉的卵; C. 斑衣蜡蝉 *Lycorma delicatula* (White) 的卵

寄主：不详。

分布：云南。

ENGLISH SUMMARY

CHOU IO LU JINSHENG HUANG JU WANG SIZHENG

(Department of Plant Protection, Northwestern College
of Agriculture, Wugong, Shaanxi, People's Republic of China)

The members of Fulgoroidea, with their sucking mouthparts, are very harmful to cereal crops, horticultural plants, medical herbs and forest trees. Researches had been conducted respectively by Fennah, Jacobi, Matsumura, Kato, and Zia. In recent years, the authors of this book have described a number of species. However, only a few destructive species on rice and the species *Fulgora candelariae* (Linnaeus) and *Lycorma delicatula* (White) have so far been biologically described.

In the past few years extensive collection expeditions had been made by Chou Io, Yuan Feng, Yang Chi-kun, Liu Sikong and others. The agricultural and forest institutes in many places have also conducted surveys and accumulated a quantity of specimens. The present book is written on the basis of these expeditions and surveys.

In the preface of the book the authors express their gratitude to the institutes and colleagues that have lent to them specimens and literature. In the general part a brief account is given to the systematic position of Fulgoroidea, their morphology, life-cycle and habits, and economic significance. In the special part descriptions are made of the characters of the 15 families from China together with the characters of genera and species (excluding species of Delphacidae, which are to be described in a different volume by another author). Appended is a key, in which there are 7 newly recorded genera, 15 newly recorded species and 6 species new to science. All the type specimens are deposited in the insect collection of the Northwestern College of Agriculture.

The identification characters of the new species are briefly described in the following.

Lacusa yunnanensis Chou et Huang, sp. nov.

Body length 5 mm; wing expanse 15—16 mm.

Head and thorax brown; vertex rectangular, middle portion slightly concave, margin keel-like, with a transverse keel near the front, middle keel apically forked; front of a long rectangular shape, slightly enlarged at base, nearly truncate both anteriorly and posteriorly, middle portion of a deeper colour, slightly concave and with 2 longitudinal lines slightly oblique, these lines merging with middle keel of vertex at the apex, lateral margins keel-like and with rows of fuscous transverse spots between lateral and longitudinal keels; clypeus brown, with 3 longitudinal keels; rostrum short and robust, reaching to hind coxae. Prothorax with 3 longitudinal keels, merging apically; mesothorax with 3 longitudinal keels nearly parallel; metasternum yellowish brown, laterally with a yellowish brown oblique longitudinal line. Abdomen brown at the basal half and black at the distal half, laterally with yellowish brown thin lines. Forewing slightly brown,

nearly transparent, with a fuscous transverse band at basal third and a fuscous V-shaped mark in the outer middle portion, with also a fuscous branched transverse band in the inner middle portion, and numerous fuscous thin lines and small spots on the surface; wing veins of the same colour as the wing itself. Hindwing slightly brown at the outer margin with wing venation dark brown. Prothoracic and mesothoracic legs fuscous, with yellow spots and wide and flattened femora and tibiae; metathoracic legs slender, yellowish brown, with fuscous spots. First tarsomere enlarged like a pad, tibia externally with 3 spines.

Host: Unknown.

Distribution: Yunnan.

Discussion: This species resembles closely *Lacusa fuscofasciata* Stål 1862, but is distinguishable from the latter by having a branched fuscous transverse band near the outer margin of the forewing and by having the meso- and metathorax fuscous. In *Lacusa fuscofasciata* Stål the band near the outer margin is unbranched and the meso- and metathorax are slightly brown.

***Gergithus esperanto* Chou et Lu, sp. nov.**

Body length about 4 mm (with forewing included).

Body grayish and yellowish green, corrugated and punctuated like orange peel. Vertex of a long rectangular shape and a cupreous brown, with two parallel transverse depressions near the hind margin and a green spot laterally at each side of the front margin; front broadest near the base, lateral margins brown and keel-like; clypeus brown distally and prominent at the middle keel; compound eyes round, fuscous. Pronotum arcuate at the anterior margin and flatly arcuate at the hind margin, with two big green spots; thorax ventrally brownish. Abdomen yellowish brown, ventrally with irregular brown lines and spots. Forewing grayish and yellowish green, without spots or lines. Legs brownish, coxae and distal tarsomere of front and middle legs blackish brown, hind tibiae with two black spines near the apex.

Holotype: ♀, Hainan Is., (Haikou), Guangdong Province.

Note: This species resembles *G. hoshunensis* Matsumura from Taiwan, but is distinguishable by the depressions and green spots on pronotum and mesonotum. As the five spots are pentagonal in distribution just like the green star used by Esperantists, it is therefore named *esperanto*.

***Sivaloka damnosus* Chou et Lu, sp. nov.**

Body length 4.5 mm (with forewing included); fuscous.

Vertex with two oblique rectangular spots blackish brown in colour. Front with two blackish brown transverse bands; one narrow and the other broad, situated at the apex and the base respectively; middle keel with a depression at each side near the base; eyes black; pedicel and flagellum black basically. Prothorax with a Λ -shaped blackish brown mark, its middle keel with a black depression at each side; mesonotum slightly prominent in middle, blackish brown, black internally at the anterior lateral angle; thorax yellowish white ventrally. Abdomen yellowish white at the posterior margin of each segment. Forewing with unequal black spots along the anterior margin, at the base and on the clavus, sometimes fused; spots in the middle portion fused into an oblique band forming a big spot at two thirds along the hind margin; spots of apex and anal angle mostly small and round. Hindwing blackish. Femora and tibiae with brown longitudinal lines; front femora all black; hind tibiae with 2 black lateral spines.

Hosts: Apple (*Malus pumila* Mill.), pear (*Pyrus* spp.), *Chaenomeles lagenaris* (Loisel.) etc.

Holotype 1♂, allotype 1♀, paratypes 15♂♂, ♀♀, collected by Chou Io from the orchard of the Northwestern College of Agriculture, 1966. One female paratype was collected by Meng Yujiao from Wugong, Shaanxi, 1983-7-22.

Life cycle and habits This species may have one generation a year in Wugong, the adults appearing during July-August. One of the authors once observed that it damaged apple and other fruit trees and occurred in great quantities.

Discussion This species resembles closely the Indian species *S. bipartita* Distant 1906, but it may be separated by the following characters: body smaller (the latter's body length 6 mm), middle keel of front prominent all through, absence of the transverse row of three protuberances, femora of front legs all black and without black terminal rings, pattern of forewing different.

***Deferunda acuminata* Chou et Wang, sp. nov.**

Syn.: *Deferunda stigmatica* Wang 1983, Entomotax. V(3): 218

Body length 3 mm. Wing expanse 9 mm. Head and thorax grayish white; vertex rectangular, two times as long as wide, lateral margins keel-like, middle portion depressed, with one middle keel and two brown longitudinal thin lines, hind margin with a brown transverse line; front prominent before the eyes, sharp-pointed, slightly depressed, with the base enlarged and flat, with a shallow middle keel, lateral margins strongly keel-like, exteriorly with three fuscous transverse lines, one thick and the other thin, middle portion laterally on each side with one oblique fuscous wedge-shaped spot; clypeus slightly deep-coloured, flattened. Pronotum extremely short, posterior margin obtusely notched, with three longitudinal keels, lateral keel exteriorly with one fuscous spot; mesonotum decorated with fuscous spots and three keels. Abdomen deeply brown, light terminally. Forewing grayish brown, narrowly long, clavus slightly enlarged, at about one third near the distal part of the front margin with a conspicuous reddish brown spot which is slightly elevated, veins with brownish spotlets or small blackish protuberances; hindwing broad, brownish, basal veins brown. Legs brownish, with a few deep-coloured spots.

Host: Coffee.

Holotype: 1♂, Xinglong, Hainan Island, 1963-VIII-8, collected by Chou Io.

This species resembles closely the genotype *Deferunda stigmatica* Distant from Bangla Desh, but may be distinguished by the head more prominent, body shorter, front wing narrowly longer and the presence of spines on hind tibia. The genotype *Deferunda stigmatica* Distant has a head anteriorly arcuate and comparatively shorter front wing (wing expanse 9 mm), with a body length of 4 mm and hind tibia spineless.

***Epora hainanensis* Chou et Wang, sp. nov.**

Body length (with front wing included) 10 mm. Old specimens yellowish green. Vertex protruding forward, front margin arcuately concave, lateral margins slightly keel-like, middle portion slightly depressed and with two parallel middle keels; front long, 2 times longer than wide, front margin arcuate, hind margin concave and slightly arcuate; lateral keels nearly parallel, middle keel elevated like a roof; clypeus small, middle keel same as in the front; rostrum short and stout, reaching to the coxae. Pronotum shorter than vertex, front margin roundly prominent, hind margin obtusely notched, lateral margins keel-like, middle portion depressed, with two parallel longitudinal middle

keels and two \wedge -shaped oblique lateral keels; mesonotum slightly longer than vertex and pronotum combined, middle portion with three keels, lateral keels arcuate and converging before middle keel. Abdomen of a deeper colour. Front wing slightly yellowish green, semitransparent, narrowly long, costal area narrow and with numerous short cross veins, with two rows of cross veins near the distal part forming 16 narrow subterminal cells and 21 terminal cells; terminal and subterminal cells of about equal length. Legs slender, hind tibia externally with 3 spines, which are fuscous-pointed.

Host: Unknown.

Holotype: 1♀, Diaoluoshan, Hainan Island, 1964-V-8, collected by Liu Sikong.

Discussion This species resembles the Indian species *E. montana* Distant 1912 but may be distinguished by the body bigger, front wing narrowly long, vertex longer and with two parallel middle keels (1 in *E. montana*), front having parallel sides (enlarged near the distal part in the latter), pronotum with \wedge -shaped lateral keels, lateral keels of mesonotum converging distally, and terminal and subterminal cells of front wing of about equal length (terminal cells longer than subterminal ones in the latter). It is closer to the Vietnamese species *E. callosa* Fennah 1978, but it is distinguished by having the front wing narrowly longer, terminal veins more densely branched, subterminal cells 16 in number, terminal cells 21 in number (11 subterminal cells and 17 terminal cells in the latter), costal cross veins about 20 in number (only 9 in the latter), and lateral keels of mesonotum converging at the apex; 9th sternum of female also differently shaped.

***Zoraida hubeiensis* Chou et Huang, sp. nov.**

Body length 7 mm; wing expanse 37 mm. Head yellowish brown, thorax brown, abdomen dorsally blackish brown with yellow spots, ventrally yellowish brown. Front wing narrowly long and semitransparent, with a dark brown broad longitudinal line stretching from the base of frontal margin to the apex; veins near the base covered with wax, costal area here colourless and transparent, wing veins mostly brown, veins within the costal broad line mostly purplish red, especially at the apex; parallel comb-like veins reaching to the front margin 14 in number. Hind wing short and narrow, not $\frac{1}{2}$ long as the front wing; costal margin with a broad semitransparent brownish band, hind margin grayish white and semitransparent, veins brown. Legs yellowish brown, slender.

Host: Unknown.

Distribution: Hubei.

Holotype: 1♂, Hubei (Songbo), collected by Chen Tong, 1980-VIII-25.

Note: This species resembles *Zoraida pterophoroides* (Westwood), but of greater size and there are branches from the medial vein.

参 考 文 献

- 广西农科院园艺研究室 1977 白蛾蜡蝉的生活习性及其防治 广西农业科学 4:28。
- 马骏超 1936 黄岩八点光蝉产卵密度之调查。昆虫与植病 4(7-9): 16-177。
- 王思政 1983 德颖蜡蝉属及其一种——中国新记录。昆虫分类学报 V(3): 218。
- 石原保 1967 原色昆虫大图鉴 III: 129-136 页, 图版 65-68。日本北隆馆。
- 布鲁斯等 1959 昆虫的分类(肖采瑜等译)。科学出版社。
- 加藤正世 1926 台湾同翅目の数种に就て昆虫2(1): 221-228。
- 加藤正世 1933 分类原色日本昆虫图鉴, 第四辑, 同翅目日本原生属。
- 江崎梯三 1932 日本昆虫图鉴 1768-1807 页。日本北隆馆。
- 周 尧 1946 斑衣蜡蝉之研究。昆虫与艺术 1(2-4): 31-54。
- 周 尧 1964 昆虫分类学 13+489 页; 表 11; 图版 90。
- 周 尧 1980 昆虫学通论 上册 第三编昆虫的分类 143-425。农业出版社。
- 周 尧、王思政、黄桔 1984 中国蜡蝉总科新种记述。昆虫分类学报 VI(4)。
- 周 尧、黄桔、王思政 1984 云南蜡蝉总科新种记述。昆虫分类学报 VI(2-3)。
- 周 尧、路进生 1977 中国广翅蜡蝉科附八新种。昆虫学报 XX(3): 314-322。
- 周 尧、路进生 1981 同翅目: 蜡蝉科。西藏昆虫 I: 221-228。
- 贺辅民 1929 一种青翅羽衣的生活史。岭南科学杂志 15(3): 521-524。
- 春日井市昆虫调查会 1979 春日井の昆虫 4.35pp 6pts。日本。
- 浙江昆虫局 1937 八点光蝉生活史考查。昆虫与植病 5(20): 420。
- 黄 桔 1983 中国颖蜡蝉科两新记录种。昆虫分类学报 V(30): 230。
- 路进生、杨秀苕 1980 漆点蔗翅蜡蝉——中国新纪录。昆虫分类学报 II(2): 108。
- 蔡邦华 1956 昆虫分类学 上册 财政经济出版社。
- Atkinson E. T. 1885 Notes on Indian Rhynchota No. 4. *Jour. Asiatic Soc. Bengal* 54: 127-157.
- Baker C. F. 1927 Spolia Mentawiensia: Homoptera-Fulgoroidea. *Philipp. Journ. Sci.* 32: 391-411.
- China W. E. 1925 The Hemiptera collected by Prof. J. W. Gregory's Expedition to Yunnan, with Synonym Notes on Allied Species. *Ann. Mag. Nat. Hist.* (9) 16: 449-485.
- Deitz L. L. and D. W. Helmore 1979 Illustrated key to the families and genera of planthoppers (Homoptera: Fulgoroidea) from the New Zealand sub-region. *New Zealand Entomologist*. Vol. 7. No. 1, pp. 11-19.
- Distant W. L. 1906 The Fauna of British India including Ceylon and Burma. Rhynchota-vol. III. London.
- Distant W. L. 1910 Rhynchota Malayana. *Rec. Ind'an Mus.* V: 313-338; pt. XXI.
- Distant W. L. 1910 Rhynchotal Notes XLIII. *Ann. Mag. Nat. Hist.* (8)5: 297-322.
- Distant W. L. 1916 The Fauna of British India including Ceylon and Burma. Rhynchota-vol. VI Homoptera: Appendix, London.
- Dlabola J. 1954 Fauna ČSR. Svazek 1. Křisi-Homoptera. pp. 1-338. Nakladatelství Československé Akademie věd.
- Dlabola J. 1974 Ergebnisse der Tschechoslowakisch-Iranischen Entomologischen Expedition Nach dem Iran 1970. Nr. 3: Homoptera, Auchenorrhycha (1. Teil). *Acta Ent. Mus. Nat. Supp.* 6: 29-89.
- Dlabola J. 1981 Ergebnisse der Tschechoslowakisch-Iranischen Entomologische Expeditionen nach dem Iran (1970 und 1973). Homoptera: Auchenorrhyncha (II Teil). *Acta Ent. Mus. Nat. Pragae.* 40: 127-311pp.; 17 photos.
- Fennah R. G. 1952 On the generic classification of Derbidae (Fulgoroidea), with description of new neotropical species. *Trans. Roy. Ent. Soc. Lond.* 103 (4): 109-170.
- Fennah R. G. 1956 Insects of Micronesia, Homoptera: Fulgoroidea, *Insects of Micronesia*. Vol. 6, No. 3. pp. 39-211.

- Fennah R. G. 1956 Fulgoroidea from Southern China. *Proc. Calif. Acad. Sci.* IV series, Vol. XXVIII No. 13, pp. 441—527.
- Fennah R. G. 1965 New species of Fulgoroidea (Homoptera) from the west Indies. *Trans. Roy. Ent. Soc. Lond.* Vol. 117, pt. 4, pp. 95—126.
- Fennah R. G. 1969 Fulgoroidea (Homoptera) from New Caledonia and the Loyalty Islands. *Pacif. Ins. Monogr.* 21, pp. 1—116.
- Fennah R. G. 1978 Fulgoroidea (Homoptera) from Vietnam. *Ann. Zool. Polska Akad. Nauk. Inst. Zool.* 34(9): 207—279.
- Ghauri M. S. K. 1973 Taxonomic notes on a collection of Fulgoroidea from tea in south India. *Bull. ent. Res.* 62, pp. 541—544.
- Gomez-Menor, J. 1951 Homopterous que atacan a los frutales. *Fit. Agr. Madrid*, 222: 1—38.
- Hori Y. 1969 Hemisphariinae of the Japan Archipelago (Hemiptera: Issidae). *Trans. Shikoku Ent. Soc.* 10(2): 49—64; pls. 2—3.
- Hori Y. 1971 Notes on some Philippine Issidae (Hemiptera) *Trans. Shikoku Ent. Soc.* 11(2): 61—170.
- Jacobi A. 1944 Die Zicadenfauna der Provinz Fukien in Südchina und ihre tiergeographischen Beziehungen. *Mitt. Münch. Ent. Gesell.* 34: 5—56.
- Lallemand V. 1928 Fulgorides nouveaux provenant de la collection du British Museum. *Ann. Mag. Nat. Hist.* (10) 1: 241—249.
- Lallemand V. 1935 Homoptera des Iles de la Sonde et de l'Australie du Nord. *Rev. Suisse Zool.* 42: 661—681.
- Lallemand V. 1963 Revision des Fulgoridae (Homoptera). *Mem. Inst. Roy. Sci. Nat. Belgique.* 10e Ser., fasc. 75. 97pp pls. I—XI Bruxelles.
- Linnavuori R. 1973 Hemiptera of the Sudan. *Not. Ent.* LIII 109—137.
- Lodos N. and A. Kalkandelen 1980 Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey, III Families Meenoplidae, Derbidae, Achilidae, Dictyopharidae and Tettigometridae. *Türk. Bit. Kor. Derg.* 4(3): 161—176.
- Lodos N. and A. Kalkandelen 1980 Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. I. Family Cixiidae Spinola. *Türk. Bit. Kor. Derg.* 4(11): 15—27.
- Lodos N. and A. Kalkandelen 1981 Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. IV. Family Issidae Spinola. *Türk. Bit. Kor. Derg.* 5(1): 5—21.
- Lodos N. and A. Kalkandelen 1981 Preliminary list of Auchenorrhyncha with notes on distribution and importance of species in Turkey. V. Families Flatidae, Ricaniidae and Cicadidae. *Türk. Bit. kor. Derg.* 5(2): 67—82.
- Melichar L. 1898 Monographie der Ricaniiden (Homoptera). *Ann. K. K. Naturhist. Hofmus.* Band XIII, Heft 2—3: 197—359 Taf. IX—XIV.
- Melichar L. 1902 Homoptera aus West-China Persien und dem Sud-Ussuri-Gebiet. *Ann. Mus. Zool. St. Petersburg* 7: 76—146; pl. V.
- Melichar L. 1912 Monographie der Dictyophorinen (Homoptera). *Abh. K. K. Zool-Bot. Gesell. Wien.* Band VII, Heft 1. 221pp., pts. I—V.
- Melichar L. 1915 Monographie der Lophopinen. *Ann. Mus. Nat. Hungarici.* 13: 337—385.
- Melichar L. 1923 Homoptera Fam. Acanaloniidae, Flatidae et Ricaniidae. *Genera Insectorum* fasc. 182, pp. 185, 2 pts.
- Metcalf Z. P. 1913 The Wing venation of the Fulgoridae. *Ann. Ent. Soc. Am.* VI (1): 341—351, pts. XXXII—XXXVII.
- Metcalf Z. P. 1945 Tropicuchidae and Kinnariidae. *Pryche* 52(1—2): pp. 120—135.
- Metcalf Z. P. 1932—1956 General Catalogue of the Homoptera. Fascicle IV Fulgoroidea, Parts 1—18.

Smith College and North Carolina State College, U. S. A.

- Muir F. 1918 Notes on the Derbidae in the British Museum Collection. *Ent. Mon. Mag.* IV: 173—207.
- Nast J. 1972 Palaearctic Auchenorrhyncha (Homoptera) an annotated check list. 550pp. Warszawa.
- Nast J. 1982 Palaearctic Auchenorrhyncha (Homoptera). Part 3. New taxa and replacement name introduced till 1980. *Ann. Zool. Polska Akad. Nauk Inst. Zool.* 36(17): 289—362.
- Ossiannilsson F. 1978 The Auchenorrhyncha (Homoptera) of Fennoscandia and Danmark. Part 1: Introduction, infraorder Fulgoromorpha. *Fauna Ent. Scandinavica*, Vol. 7, pt. 1. 222pp.; 36 pt-figs.
- Remane R. and M. Asche. 1979 Evolution und Speziation der Gattung *Cixius* Latreille 1804 (Homoptera Auchenorrhyncha Fulgoromorpha Cixiidae. *Märburgen Ent. Publ.* 1(2): 1—264.
- Schmidt E. 1908 Die Arten des Eurybrachinen-Genus *Ancyra* White, ein Beitrag zur Kenntnis der Fulgoriden (Hemiptera-Homoptera). *Zool. Anz.* XXXII; 764—769.
- Vilbaste J. 1971 Eesti Tirdid, Homoptera: Cicadinea. pp. 1—283. Eesti Teaduste Akademie.
- Wade V. 1960 General Catalogue of the Homoptera Species Index of Fascicle IV Fulgoroidea. North Carolina State College, U. S. A.
- Walker F. 1857 Catalogue of the Homopterous Insects collected at Singapore and Malacca by Mr. A. R. Wallace, with descriptions of New Species. *Jour. Proc. Linn. Soc.* 1: 82—100; pls. 3—4.
- Walker F. 1857 Catalogue of the Homopterous Insects collected at Sarawak, Borneo, by Mr. A. R. Wallace, with Descriptions of New Species. *Jour. Proc. Linn. Soc.* 1: 141—175; pls. 7—8.
- Walker F. 1858 Homoptera. Insecta Saundersiana; or Characters of Undescribed Insects in the Collection of William Wilson Saunders, Esq. 1—117.
- Wu C. F. 1935 Catalogus Insectorum Sinensium Vol. II, Peking Nat. Hist. Bull.
- Zelazny B. 1981 The Philippine species of Rhotanini (Homoptera: Derbidae) and their Distribution outside the Philippines. *Pacific Insects* 23 (3—4): 215—285.
- Zia Y. 1935 Note sur les Flatinae et les Ricaniinae de la Chine du sud et du Tonkin (Homoptera Fulgoride). *Sinensia* 6(5): 525—540.
- Вильбасте, Ю. 1965 К фауне Цикадовых Алтая, 144стр. 91 рис. Академия Наук Эстонский ССР.
- Вильбасте, Ю. 1968 К фауне Цикадовых Приморского Края, 180 стр. Рис. 148. Академия Наук Эстонской ССР.
- Вильбасте, Ю. 1980 Фауна Цикадовых Тувы, 220 стр. Академия Наук Эстонской ССР.